

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY



(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference P12014WO	FOR FURTHER ACTION See Form PCT/PEA/416	
International application No. PCT/EP2005/001813	International filing date (day/month/year) 22.02.2005	Priority date (day/month/year) 02.03.2004
International Patent Classification (IPC) or national classification and IPC INV. C11D3/38 C11D3/02		
Applicant DALLI-WERKE GMBH & CO. KG		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 8 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> <i>sent to the applicant and to the International Bureau</i>) a total of 13 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input checked="" type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> <i>(sent to the International Bureau only)</i> a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand 23.11.2005	Date of completion of this report 31.05.2006	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Miller, B Telephone No. +49 89 2399-8540 	

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2005/001813

Box No. I Basis of the report

1. With regard to the **language**, this report is based on

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4(a))
 - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-28	as originally filed
29-36	received on 15.04.2005 with letter of 13.04.2005

Claims, Numbers

1-9	received on 23.11.2005 with letter of 22.11.2005
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Drawings, Sheets

1/3	as originally filed
2/3, 3/3	received on 15.04.2005 with letter of 13.04.2005

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☒ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☒ the claims, Nos. 3,9
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2005/001813

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	6,8
	No: Claims	1-2,4-5,7
Inventive step (IS)	Yes: Claims	8
	No: Claims	1-7
Industrial applicability (IA)	Yes: Claims	1-8
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item I

Basis of the report

The amendments filed with the letter dated 22.11.2005 introduce subject-matter which extends beyond the content of the application as filed, contrary to Article 34(2)(b) PCT.

The amendments concerned are the following:

Claim 3: wherein the *protein cluster*, protein or *protein fragment* is a random coil.

on page 3, lines 13-15 as originally filed a basis can only be found for the condition that the **protein** is a random coil.

Claim 9: the result of a single example using a specific manganese proteinate cannot be regarded as a general disclosure for the effect to be achieved for all possible manganese proteinates. Thus, the generalisation defined in present claim 9 is not fairly based on the originally filed documents.

Moreover, the results of test 3 of the application as originally filed do not demonstrate an increased bleaching performance (as to be expected when using a bleach activator) but only demonstrate that the amount of available oxygen in the composition is not decreased. The two different effects (increase of bleaching power and decrease of available oxygen is lowered when compared to the use of MnSO_4) are related but not identical.

Thus, claim 9 contravenes the requirements of Article 34(2)(b) PCT, since the effect is not explicitly described and in addition is unduly generalised.

Consequently, this report has been established as if said amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2© PCT).

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Cited documents

The following documents (D) are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1: WO-A-03/104368

D2: WO-A-96/41860

D3: DE-A-43 15 397

D4: WO-A-95/20030

D5: US-B-3 969 540

D6: US-B-5 358 722

2. Novelty (Article 33(2) PCT)

- 2.1. The present application does not meet the criterion set forth in Article 33(2) PCT because the subject-matter of claim 1-2,4-5 and 7 is not new in respect of the prior art as defined in the regulations (Rule 64(1)-(3) PCT).

D2 discloses enzyme-containing granulate (claim 1) suitable for incorporation in particulate cleaning agents which also contains anti-corrosion agents for silver as an intimate mixture with the organic carrier (according to claim 15: cellulose, saccharose, starch (a polymer matrix)). Thus, the carrier surrounds the anti-corrosion agent. The anti-corrosion agent can be a manganese compound (claims 2-3,9). The enzyme granulate comprises high amounts of an enzymatic protein (claim 4). Therefore, during granulation at least a part of said manganese compound should also be surrounded, enclosed by (comprised in) or attached to (associated with) said enzymatic protein (wherein any protein can be also regarded as protein fragment, protein cluster or peptide in absence of any further restrictions in the claims). Since the bleaching agent and the anti-corrosion agent are provided as separate granules, these ingredients have no direct contact to each other in the final cleaning composition (claim 21).

- 2.2. Moreover, since the intended use of a composition is not suitable to distinguish a per se known composition from the prior art (Guidelines Chapter 12.05) as long as the

composition **is suitable for** the intended "new" use, the following documents disclose compositions falling into the scope of present claims 3-4.

It might well be that cleaning composition may contain further common ingredients such as surfactants but these ingredients are not required by the present claims.

Since water itself can also be used for cleaning, any composition can be regarded as cleaning composition.

- a) D5 exemplifies a process for producing manganese proteinate (examples 4, 9). The final reaction composition before isolation of the proteinate has a pH of 8.5 (typical for washing compositions) and contains manganese associated with the protein.
- b) D6 discloses a composition comprising manganese proteinate (example 11) having a manganese (IV) core. The composition has a pH of 7.5 (typical for washing compositions).

2.3. The use of manganese proteinate for silver protection is not known from the cited prior art. Thus, the subject-matter of present claim 8 is novel.

3. **Inventive Step** (Article 33(3) PCT)

- 3.1. The general problem to be solved by the present application can be regarded as to provide a silver anti-corrosion compound, wherein the anti-corrosion agent can be used without being modified, e.g. being coated with a waterproof coating layer prior to its use in cleaning compositions (page 2, lines 7-11).

This problem is solved by using a manganese compound which is comprised in or associated with a protein.

The general problem of providing anti corrosion agents which can be used directly or in direct combination with further actives, is also addressed by document D2 (paragraph bridging pages 5-6).

Document D2 (claim 1) moreover indicates that it is convenient to incorporate the anti-corrosion agent within a polymer matrix/carrier.

D2 thereby addresses explicitly anti-silver corrosion agents and is thus regarded as the closest prior art.

The subject-matter of claim 6 differs from the teaching of D2 in that the bleaching agent in that the cleaning composition is comprised of layers comprising the incompatible ingredients separately.

The objective technical problem of providing a stable cleaning composition is thus solved by a routine measure for the skilled person, since separating incompatible ingredients by using multi-layered tablet is common practice to the skilled person for years.

Thus, the subject-matter of present claim 6 lacks an inventive step (Article 33(3) PCT).

3.2. The present application does not show any effect relating to the fact that the protein is a random coil. Thus, starting from D2 the use of a random coil has to be regarded as an arbitrary modification in order to provide a mere alternative, contrary to Article 33(3) PCT.

3.3. The use of manganese proteinate as silver anti-corrosion is not disclosed by any of documents D1-D6.

Since the examples of the present application clearly indicate, that manganese proteinate is suitable for preventing silver corrosion in a dish-washing process, claim 8 is regarded as inventive.

3.4. However, from the present application it is not visible which effect can be achieved by using such a manganese proteinate in toilet cleaning or laundry.

Thus, using manganese proteinate in a cleaning process other than dishwashing has to be regarded as an arbitrary modification of well known cleaning processes using commonly applied cleaning compositions.

Since no effect is indicated in the present application, the use of such a manganese proteinate in any cleaning composition (present claim 1) has thus to be regarded as arbitrary and therefore lacking an inventive step (Article 33(3) PCT).

**INTERNATIONAL PRELIMINARY
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(SEPARATE SHEET)**

International application No.

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Re Item VIII

Certain observations on the international application

The terms "protein fragment" and "protein cluster" are vague and have no well defined and precise meaning (Article 6 PCT).